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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,916	02/14/2002	Matthias Weiss	A34942	1714
21003	7590	11/10/2004	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			TSAI, HENRY	
			ART UNIT	PAPER NUMBER
			2183	

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/075,916

**Applicant(s)**

WEISS ET AL.

**Examiner**

Henry W.H. Tsai

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/12/02 and 5/28/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12, 14, 15 and 17 is/are allowed.
- 6) ☒ Claim(s) 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 13 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

Note this supplemental office action is issued due to the preliminary amendments mailed 8/12/02 and 5/28/02 were not considered. The previous action mailed 8/2/04 has been vacated.

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, in claim 12, "said active state of said set bit causes said information parts of said program word to be stored in said registers" must be shown or the feature(s) canceled from the claim(s). Note in Fig. 1, the connections between Sequence Memory 9 and Read Pointer Register; and between Sequence Memory 9 and Write Pointer Register should be indicated. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the

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appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

At page 7, line 11, "instruction word processor 10" and at page 8, last line, and page 9, line 8, "instruction word generation 10" are not consistent. It is suggested to change them to -instruction word generation processor 10"- (or -instruction word generator 10-).

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At page 8, line 6, "instruction word 11" should read - instruction word output 11-.

At page 9, line 11, "10" should read -12-.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 13 and 16 are objected to because of the following informalities:

In claim 13, line 3, "registers" should read -register-.

In claim 16, lines 2-3, " ... said processor wherein said instruction words are stored in a first page of said instruction word memory causes said processor ... " is not understandable. It is suggested to change them to "... said processor, wherein said instruction words are stored in a first page of said instruction word memory, causes said processor ...".

In claim 16, lines 4-5, "second interrupt task" lacks proper antecedent basis. It is suggested to change "interrupt second task" in line 4 to -second interrupt task-.

Appropriate correction is required.

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***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 18, line 2, "the improvement" is not further described (the improvement of what ? ). Therefore, the real limitations of the claimed invention are unclear.

Applicant is required to review the claims and correct all language which does not comply with 35 U.S.C. § 112, second paragraph.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Desal et al. (U.S. Patent No. 5,347,638) (hereafter referred to as Desal et al.'638).

Referring to claim 18, Desal et al.'638 discloses as claimed in a digital processor wherein instruction words (inside register file 202, see Fig. 3, and also see col. 6, lines 32-39, regarding the instruction words stored in the register file 202) are stored in an instruction word memory (register file 202, see Fig. 3) having row addresses, the improvement wherein said instruction word memory is addressed by an address generation unit (inside controller 200, see col. 6, lines 67-68, and col. 7, lines 3-4, regarding the controller 200 providing address information to the register 202).

***Claim Rejections - 35 USC § 103***

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Desal et al. (U.S. Patent No. 5,347,638) (hereafter referred to as Desal et al.'638) in view of Miller (U.S. Patent No. 5,079,693) (hereafter referred to as Miller'693).

As to claim 19, Desal et al.'638 also discloses: a read pointer register (R. pointer register 280, see Fig. 3) and a write pointer register (W. pointer register 270, see Fig. 3) are arranged in the generation unit (inside controller 200, see col. 6, lines 67-68, and col. 7, lines 3-4, regarding the controller 200 providing address information to the register 202).

However, Desal et al.'638 does not explicitly disclose: an associated read pointer up/down counter, and an associated write pointer up/down counter, wherein said counters provide ring



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counting in accordance with the contents of a block length register.

Miller'693 discloses a system comprising: an associated read pointer up/down counter (216 see Fig. 4), and an associated write pointer up/down counter (266, see Fig. 4), wherein said counters provide ring counting (since there are INC 214 and INC 266 for incrementing) in accordance with the contents of a block length register (note a block length is a predetermined number inherently saved in the Miller'693's system such as in the register inside RAM and connected with counter 216 by bus 220, see Fig. 4, see also col. 5, lines 29-31, or in a memory controller in the Miller'693's system).

Desal et al.'638's system needs to generate a specific address for each memory (202) reference. It is time consuming especially when a big amount of the memory references are to be executed. However, it is well known in the art to use an up/down counter in order to provide the addresses in sequence for memory references to increase the performance.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Desal et al.'638's system to comprise: an associated read pointer up/down

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counter, and an associated write pointer up/down counter, wherein said counters provide ring counting in accordance with the contents of a block length register, as taught by Miller'693, in order to efficiently read or write the instruction word memory for the Desal et al.'638's system when a big amount of the memory references are to be executed.

***Allowable Subject Matter***

6. Claims 10-12, 14, 15, and 17 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: Desal et al.'638 and Miller'639, the closest references, and the other prior art do not teach or fairly suggest: the steps of reading from the instruction word memory an instruction word and writing the instruction word into the instruction word memory after it is modified by substituting an instruction word part with an information part of an associated program word (in claim 10 and 15) in combination with all of the other limitations in the respective independent claims 10 and 15. Besides, the combination is not obvious.

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8. Claims 13 and 16 would be allowable if rewritten or amended to overcome the objection(s) as set forth in this Office action.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure wherein Sindalovsky'265 discloses method and apparatus for generating status flags in a memory device. The reference teaches using write pointer register and read pointer register for facilitating access a memory device; and Simpson'191 discloses a FIFO memory system also using write pointer register 14 and read pointer register 16 for accessing the main memory RAM.

### ***Contact Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (571) 272-4176. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful,

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the examiner supervisor, Eddie Chan, can be reached on (571) 272-4162. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC central telephone number, (571)272-2100.

11. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into the Group at fax number: 703-872-9306. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.



HENRY W. H. TSAI  
PRIMARY EXAMINER

November 1, 2004